

Remarks/Arguments:

Claims 7-16 are pending.

Claims 1-6 and 17-26 are cancelled without prejudice or disclaimer, with claims 20-26 being cancelled, as withdrawn from consideration, pursuant to restriction.

Claims 7, 10, and 14 are amended, hereby, to correct inadvertent clerical inconsistencies, i.e., by changing "poise" to "poises."

Claims 7-16 were rejected under 35 USC 103 as being allegedly obvious over Okuda (JP 06 198152) ('040 in the statement of rejection) in view of Cobbs (US4778631) ('631 in the statement of rejection). Reconsideration is requested.

For the reasons set forth in their amendment filed September 9, 2009, at pages 10-16 (incorporated herein by reference), the rejection cannot be maintained. And, therefore, withdrawal of the rejection is in order. Nevertheless, besides those previously provided, the following reasons (independently) demonstrate that the final rejection cannot be maintained.

The final rejection cannot be maintained because (as detailed below) (1) the combined teachings of the prior art would, in fact, have led the skilled artisan away from the presently claimed invention and (2) the combined teachings of the cited references do not satisfy the all limitations rule, which satisfaction is necessary reject the claims under § 103.

The presently claimed invention provides a one-pack-type curing paste material (claims 14-16), a method of producing an expandable material using a piston pump and the one-pack-

type curing paste material (claims 7-9), and a method of producing an expandable material using a mechanical foaming apparatus and the one-pack-type curing paste material (claims 10-13).

In that all of the rejected claims incorporate the one-pack-type curing paste material of the present invention, a limitation on all of the rejected claims is the limitation (on the “paste material”) to a viscosity of 20 – 30,000 poises, or 0.02 - 300 centipoise (cps).

Okuda (column 1, lines 64-65) exemplifies a “high-viscosity material” as one “as high as, for example, 100,000cps.” Okuda (column 1, lines 36-46) also exemplifies a “high-viscosity material” as the “hotmelt adhesive” described in JP 63-264327; which, as acknowledged by the PTO, is the Japanese equivalent of Cobbs, cited in the instant rejection.

Cobbs (column 3, lines 13-17) defines “polymeric materials having high viscosities” as those having “on the order or 50,000 to above 1,000,000 cps.”

In should be pointed out, here, that the PTO mistakenly states (final Office Action, page 5) that Cobb discloses “high-viscosities ranging from 22 poises – 400 poises [0.22cps – 4cps], 500 poises to above 10,000 poises [5cps – 100cps].” As evident from the foregoing paragraph, the PTO is simply wrong, with all due respect.

In view of the foregoing, it is safe to say that Okuda and Cobbs mean about the same viscosity value when using the term “high viscosity,” *i.e.*, typically, a viscosity in the range 50,000cps – 1,000,000cps. On the other hand, as explained above, the maximum viscosity of the “paste material” recited in the rejected claims is 300cps (*i.e.*, “30,000 poises”.)

As explained above, Okuda discloses a "piston pump" for mixing "a high-viscosity material," with the term "high viscosity" meaning the same as what "high viscosity" means in Cobbs, *i.e.*, "viscosities on the order of 50,000 to above one million cps." Cobbs, of course, does not teach or suggest a piston pump mixer (as used in Okuda), but rather a "disc mixing apparatus" (Cobbs, column 3, line 64). Nevertheless, as argued by the PTO, itself, each of Okuda and Cobbs uses its described device to mix "high-viscosity" materials.

With respect to the high viscosity material—in conjunction with Cobbs uses a "disc mixer" and Okuda uses a "piston pump"—Cobbs (column 16, lines 51-60) teaches (emphasis added):

It will be further recognized that the present invention can foam materials having viscosities from several thousand centipoises to 1,000,000 cps or more. However, below about 10,000 cps, it is usually more efficient to use a gear pump for foaming. Thus, the present invention finds particular applicability in foaming materials above 10,000 cps and typically above 50,000 cps where problems of inadequate mixing, unacceptable temperature rise, and reduced throughput arise and become increasingly acute.

As such, Cobbs teaches—one of ordinary skill in the art—not only not to use a disk mixer with materials having viscosities less than 1,000,000 poises ("10,000 cps") but, also, to use a "gear pump" for mixing such lower viscosity materials.

In other words, not only does Cobbs provide no motivation for using the "piston pump" described in Okuda for mixing materials having viscosities less 1,000,000 poises, such as the "paste materials" recited in the rejected claims, which have a maximum viscosity of only 30,000

poises, Cobbs effectively teaches away from using the "piston pump" described in Okuda to mix the "paste material" having a maximum viscosity of "30,000 poises," as in the rejected claims.

"A reference may be said to 'teach away' when a person of ordinary skill, upon reading the reference, . . . would be led in a direction divergent from the path that was taken by the applicant." *In re Gurley*, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994). Cobbs certainly "may be said to 'teach away,'" in the present instance, because "a person of ordinary skill, upon reading the reference, . . . would be led in a [gear-pump mixing] direction," which is certainly "divergent from the [piston-pump mixing] path that was taken by the applicant." *Gurley*, 31 USPQ2d at 1131.

Since Cobbs teaches away from the presently claimed invention, the PTO has failed to establish a *prima facie* case of obviousness, i.e.:

To establish a *prima facie* case of obviousness . . . [one] must show "some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references." [citation omitted] There is no suggestion to combine, however, if a reference teaches away from its combination with another source [citation omitted].

Tec Air, Inc., v. Denso Manufacturing Michigan Inc., 52 USPQ2d 1294, 1298 (Fed. Cir. 1999) (emphasis added). If one of two cited references "teach[es] away from [the other], then that finding alone can defeat [the] obviousness claim." *Winner Int'l. Royalty Corp. v. Wang*, 53 USPQ2d 1580, 1587 (Fed. Cir. 2000), *cert. denied*, 530 U.S. 1238 (2000).

Besides teaching away from the presently claimed invention, the teachings of Okuda and Cobbs, even if combined, fail to satisfy the all limitations rule for establishing a *prima facie* case

of obviousness under § 103(a). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art," *In re Wilson*, 165 USPQ 494, 496 (CCPA 1970), "and it is error to ignore specific limitations distinguishing over the [prior art] reference." *Ex parte Murphy*, 217 USPQ 479, 481 (PO Bd. App. 1982). A "ground of rejection is simply inadequate on its face . . . [when] the cited references do not support each limitation of [the] claim." *In re Thrift*, 63 USPQ2d 2002, 2008 (Fed. Cir. 2002).

As explained above, the rejected claims are limited to a "paste material" having a viscosity in the range 20 – 30,000 poises. On the other hand, the minimum viscosity of the "high-viscosity" materials described in Okuda and Cobbs is 1,000,000 poises ("10,000cps"). Since "the cited references do not support each limitation of [the rejected] claim[s]," the obviousness rejection is "inadequate on its face." *Thrift*, 63 USPQ2d at 2008.

In view of the foregoing remarks, the rejection of claims 7-16 under §103(a), based on the combined teachings of Okuda and Cobbs, is overcome. Withdrawal of the rejection appears to be in order.

Additionally, the rejection under § 103(a) is "based on facts within the personal knowledge of an employee of the Office" and, as such, applicants call for "the affidavit of such employee," to support such facts. 37 CFR 1.104(d)(2) [MPEP 707.05]. An indispensable basis of the obviousness rejection is the examiner's argument (final Office Action, page 5) (emphasis

added) "The effect of shear rate on viscosity is a known relationship for shear thinning fluids."

The statement of rejection admits that neither Okuda nor Cobbs teaches or suggests the "shear rate" limitations on the rejected claims (final Office Action, page 4, last paragraph, and page 5, first paragraph.) In order to make up for this deficiency in the factual record, it is argued (final Office Action, page 5, first paragraph) "the effect of shear rate on viscosity is a known relationship for shear thinning fluids and thus it would be obvious to one of ordinary skill in the art through routine experimentation to alter the shear rate in order to achieve the desired high viscosities." Since no support (*i.e.*, factual documentation) is provided for this "known relationship" (*i.e.*, the effect of shear rate on viscosity for shear thinning fluids"), it constitutes a fact (or, more precisely an allegation of fact) within the personal knowledge of the examiner, on which the rejection is based.

Of course, in the absence of the examiner's affidavit or supporting documentary evidence, for this reason alone, the rejection cannot be maintained. An argument by the PTO is "not prior art." *In re Rijckaert*, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993). "It is facts which must support the legal conclusion of obviousness." *Ex parte Crissy*, 201 USPQ 689, 695 (POBdApp 1976).

Attorney Docket No. P70693US0
Application No. 10/541,619

Favorable action is requested.

Respectfully submitted,



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